

Application of Mixed-Stock Analysis for Yukon River Fall Chum Salmon, 2009

Here we report interim results for genetic mixed-stock analysis (MSA) of Yukon River chum salmon harvested from the Pilot Station sonar test fishery in 2009; this is a continuation of previous work by Flannery et al. (2007). Fall chum salmon did not outnumber summer chum salmon until the July 28 to August 4 time period, well after the start of the fall management season. Overall, the largest contribution to the 2009 fall chum salmon return came from the U.S. border region (38.5%). Contributions of fall chum salmon from other regions were: Tanana 25.7%, Canada mainstem 20.2%, Canada Porcupine 3.9%, White 11.1%, and Teslin 1.0%.

The abundance estimates derived from combining the results from genetic and sonar estimates continued to be less than those from the escapement and harvest estimates. The level of agreement between the methods appears to be related to the run timing in a given year, with better agreement when the fall run is not late. For 2009, the comparison was hampered by the discontinuation of the Tanana River mark and recapture and Chandalar River sonar projects.

Key Words: chum salmon, Yukon River, mixed-stock analysis, microsatellites.

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